Community Health Education & Outreach in Texas

ATSDR's Division of Community Health Investigations

If you like eating crab, finding and digging out the tender, flavorful meat can be hard work that may be worth the effort. But getting to the crabmeat is not the only problem with eating crab; crab and other seafood with high fat content are very susceptible to contamination from polluted water and sediment.

Eating crabs, fish, and other types of seafood can expose you to toxic substances known to cause cancer and other diseases. This is because seafood can come from bodies of water that have runoff from industrial or waste facilities. So, if you like to catch your own seafood, you should always check local fish advisories for safe places to fish.

County and state departments of health and the environment monitor local water contamination and, if needed, issue fish advisories to protect residents from toxic substances. For those who don't know about fishing advisories or who ignore posted warning signs, sometimes these agencies take additional steps to let people know the risks. With funding from the Agency for Toxic Substance and Disease Registry (ATSDR), a team of environmental health specialists at the Texas Department of State Health Services (DSHS) has been educating residents about the risks of eating fish caught in chemically contaminated water.

San Jacinto River Waste Pits Superfund Site

The San Jacinto River Waste Pits (SJRWP) Superfund site near Houston, Texas, received wastes from paper mill activities from the mid 1960s to the mid 1970s. Today, fish and blue crab in the river area are contaminated with dioxins and other chemicals. Beginning in 1990, DSHS issued a consumption advisory for blue crab and all fish species for the San Jacinto River Waste Pits site and the Houston Ship Channel. The advisory also includes certain fish species and blue crab for Upper Galveston Bay. The main contaminants of concern are dioxins, organochlorine pesticides, and polychlorinated biphenyls (PCBs). But even after warning signs were posted throughout the river system and a fence was placed around the most contaminated parts of the site, people continued to eat fish and crab caught in the area.

Between 2007 and 2013, the DSHS team conducted a number of educational campaigns along the San Jacinto River and Houston Ship Channel. The goal of these campaigns was to give area residents the knowledge necessary to make informed decisions about eating fish and crabs caught in the river. The team distributed nearly 7,000 pieces of educational material while visiting with people who were swimming and fishing along the river and through partnerships with Texas Parks and Wildlife, the Galveston Bay Foundation, and the Baytown Nature Center. After talking with several residents, the team learned that while some people fished only for recreational purposes, others intended to eat the fish. Some indicated they enjoyed the fish for its fresh quality. In this instance, the health educator stressed, "fresher is not always better."

The DSHS team encountered a man who was fishing and crabbing with his four young nephews. The man explained that taking the boys fishing and crabbing was a way to get them outside and away from their video games. So DSHS staff explained the risks of consuming fish and crab from *this* particular river and

suggested alternative areas to fish so that the man and his nephews could continue to enjoy their shared activity.

Donna Reservoir and Canal System Superfund Site

The Donna Reservoir and Canal System Superfund site is located near the cities of Donna and Alamo, Texas in Hidalgo County. With a total population of about 16,000, the City of Donna has a large number of children (30% below the age of 14) and minority residents (93% Hispanic origin). The area around the site can be characterized as *colonia* neighborhoods—temporary housing for recently immigrated populations.

Since 1994, DSHS has banned people from possessing fish due to PCB contamination in the Donna Reservoir and Canal System. However, the DSHS team learned that residents continued to consume fish, likely contaminated with PCBs, from the reservoir and canal system. Because the population is transient and lacks access to many basic quality-of-life services, the team realized that any outreach and education activities must be tailored to the needs of this already vulnerable group.

Giving Information to Medical Providers

The Texas team talked with physicians and other providers at health clinics in the city of Donna about health outcomes associated with PCB exposures. The team also distributed medical information on PCBs through Texas A&M's Health and Medical Center. While visiting local healthcare facilities, the team had a long conversation with one physician about the health risks associated with PCB exposure and efforts to heighten awareness. The physician commented, "Texas DSHS is putting forth a huge effort to help citizens understand their potential risks from exposure."

Outreach to Local Restaurants

In response to the US Environmental Protection Agency's (EPA's) concern that restaurants could be serving contaminated fish, DSHS visited local eateries to educate them about the risks of serving fish from the Donna Reservoir and Canal System. One woman the team met while visiting restaurants, was not only grateful for the information, but also asked for extra copies of the materials to give to friends who were eating fish from the site.

Visiting and Talking with Residents

Between 2005 and 2013, the Texas team, in partnership with EPA, conducted door-to-door visits in the *colonias*, distributing nearly 5,000 pieces of educational materials in English and Spanish. Staff talked to over 750 people to establish which residents knew about the site, which residents were eating local fish, and to determine the number of children potentially exposed.

Perhaps most important, the team collaborated with A Resource in Serving Equality (ARISE), a community group, to reach out to the local immigrant population. ARISE is made up of community members and *promotoras* (Hispanic/Latino community members who receive specialized training to provide basic health education to the local community) that educate people about health, childcare needs, education, and social issues and advocate for measures to improve quality of life. The team presented information in Spanish to the *promotoras*, who passed it along to their friends, family, and social groups.

The team effectively overcame language and cultural barriers by working with trusted community members to communicate the important public health messages.

Community-Level Interactions

Health education outreach has enabled the DSHS team to meet, connect, and learn from a variety of people. The one-on-one conversations allow staff to determine when the public health message has been successfully delivered. This type of outreach shows community members that DSHS staff care and allows staff to develop even more meaningful relationships with the community. Using these approaches, the DSHS team has been able to better identify community-specific needs, many of which extend beyond their scope of responsibility. For instance, DSHS collaborated with the City of Houston's Bureau of Community and Children's Environmental Health Program to provide residents information about the City's lead abatement program. Through ongoing community involvement and health education activities, the Texas team will continue to enhance their ability to serve and improve the quality of life for the people of Texas.